

calculated as an emotion-based and solution-based score out of eight possible reactions when children experience problems. The four basic emotions (happy, sad, angry and anxious) were asked via a 0–10 scale. Preliminary results: 25% of the children (27% boys, 23% girls) were at risk for stress, as they experienced more life-events than norm-based cut-offs. A significant ( $P < 0.05$ ) negative Spearman correlation (adjusted for age and sex) was found between the solution-based score and systolic blood pressure. Significant ( $P < 0.05$ ) partial positive correlations were found between negative events in the last year and BF%; and between waist-to-hip ratio and negative events in the last

6 or 9 months. Mann–Whitney  $U$  test revealed that children at risk by events during the last 9 or 3 months had a higher waist-to-hip ratio.

*Conclusions:* Our results revealed some influence of stress on body composition among Belgian children. Stressed children (experiencing more life-events) had a bigger chance to have obesity-related symptoms like higher waist-to-hip ratio and BF%.

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## 76 – Preschoolers' neophobia and pickiness in association with parental characteristics

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*Aim:* To investigate food neophobia and pickiness in pre-schoolers and in their mothers, with regard also to food consumption patterns, feeding and weaning.

*Design:* Matched child and maternal data collected by means of self-report questionnaires administered to mothers.

*Setting:* Kindergartens of the City of Rome Municipality, Italy.

*Participants:* One hundred and twenty-seven mother–child pairs. Children aged from 2 to 6 years.

*Main outcome measures:* Mothers' and children's food neophobia and pickiness.

*Analysis:* Mann–Whitney  $U$  and Kruskal–Wallis tests for intergroup comparisons. Correlation analyses were performed using Spearman's  $\rho$ .

*Results:* Mothers' and children's neophobia and pickiness were associated (neophobia  $\rho = 0.223$ ,  $P = 0.012$ , pickiness  $\rho = 0.311$ ,  $P = 0.001$ ). Pickiness and neophobia were related in both mothers' ( $\rho = 0.186$ ,  $P = 0.037$ ) and children's ( $\rho = 0.528$ ,  $P = 0.001$ ) samples. Maternal and child nutritional patterns were correlated ( $\rho$  between 0.18 and 0.69,  $P = 0.01$ ). Overweight and obese children were more neophobic (5.72 (SD 2.7) *v.* 6.87 (SD 2.2);  $P = 0.03$ ) and picky (5.72 (SD 2.7) *v.* 6.87 (SD 2.2);  $P = 0.03$ ) than normal weight children.

*Conclusions and implications:* Food neophobia, pickiness and parental dietary patterns influence child food acceptance/avoidance. Counselling for parents in clinical practice is important for the reduction of child neophobia and pickiness.

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## 77 – Differences of energy, macronutrient (carbohydrate, protein and fat) and micronutrient (vitamin B<sub>12</sub>, calcium and zinc) intake among stress postgraduate students of public health sciences

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**Introduction:** Stress causes nutrition absorption disorder and then reduces antibody. Emotional and environmental stress will lose vitamin C as much as 2500 mg within a short period. Another bad impact is reducing supply of vitamin B<sub>12</sub>, vitamin C, calcium and zinc.

**Method:** The study was an observational type, which used a nested design. It used a quantitative approach to analyse stress and intake of energy, macronutrient and micronutrient. Subject of the study were as many as thirty-four postgraduate students of public health sciences of Gadjah Mada University of academic year 2004/2005. Data of respondents' identity, intake of protein, macronutrient and micronutrient were achieved directly

through questionnaires. Data of stress were collected using stress questionnaires. Intake data analysis used Nutri-Survey programme. ANOVA tests were used to identify differences of average consumption of macro- and micronutrients. ANOVA statistical test used SPSS program for windows version 10.0 with 95% CI,  $P < 0.05$ .

**Results:** Result of ANOVA analysis showed that there was no significant differences between intake of macronutrient and level of stress.

**Conclusions:** There was no significant difference of macronutrient and micronutrient intake with low, middle and high level of stress among postgraduate students of public health sciences of academic year 2004/2005.

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## 78 – Validation of the Russian version of Parental Feeding Style Questionnaire and its applicability

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**Aim:** To determine a reproducibility and a validity of the Russian version of Parental Feeding Style Questionnaire (PFSQ).

**Method:** The English version of PFSQ was translated into Russian by two independent translators, then verified and corrected. The final Russian version was translated back into English and verified. Forty parents of 3–5-year-old children attending the day-care centre filled in the final Russian version PFSQ twice, 3 weeks apart. Validity was assessed by comparing the scores of four aspects of parental feeding style (emotional feeding, instrumental feeding, control over eating and encouragement to eat) received in the 1st and the 2nd

rounds of the survey. Pearson correlation coefficient was used for the statistical analysis.

**Results:** The results of statistical analysis demonstrated good reproducibility and validity of the Russian version of PFSQ. Pearson correlation coefficient for instrumental feeding was 0.42, control over eating – 0.76, for emotional feeding – 0.79, for encouragement – 0.86.

**Conclusions:** Russian version of Parental Feeding Style Questionnaire is valid and may be useful for getting reliable information on the role of parental feeding style as a factor favouring or protecting from overweight and obesity in children.

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## 79 – The challenges and findings in measuring the behavioural determinants of obesity in children in Europe

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**Introduction:** Effective preventive action on childhood obesity needs to understand children's behaviour and measurement of upstream determinants is vital. Nutrition and physical activity choices are influenced by complex factors that change throughout childhood, such as parental behaviour, walk to school initiatives and school meal poli-

cies. An EU project sought to identify the population-level data available. Thirty-one countries were covered.

**Method:** A systematic literature review of nutrition and physical activity determinants of childhood obesity was undertaken. From this life-stage optimum feasible population level data sets were identified. Finally, analysis of